THE INFLUENCE OF PLAY THERAPY IN DEVELOPING THE INTELLIGENCE OF SCHOOL AGE CHILDREN WITH MENTAL RETARDATION

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Abstract
Mental Retardation (MR) is a heterogeneous disorder that consists of lower than average intellectual function along with the disruption of adaptive skills. Play therapy is an effective approach to train children with mild MR in studying the concept of learning. Play therapy is conducted in a special room designed as a playground, equipped with special toys to stimulate potential development of children with mild MR. This research aimed to improve the success of the potential development of intelligence in children with mild MR using WISC instrument through play therapy. The study design used quasi-experimental method (quasi-experiment) and qualitative analysis. The subjects of this study were thirteen 7–12 years old children with mild MR in extraordinary school Putra Bangsa Surabaya. The analysis approach used was statistical analysis with Wilcoxon and Kruskal Wallis approaches. A descriptive analysis was subsequently carried out to provide a snapshot of MR conditions that accompany the child including: internal factors, i.e. the phase experienced by the child during pregnancy, childbirth, breastfeeding and the stage of growth and development, and external factors i.e. the family's socioeconomic condition and children upbringing. The results showed that 7 out of 13 children with mild MR had experienced an increase in the potential development of intelligence. In terms of the relation between the therapy frequency and the children success rate, 5 of 7 mild MR children who were successful were in the category of frequent treatment of play therapy. In conclusion, play therapy can increase the potential for successful intelligence development of children with mild MR. This success is associated with treatment frequency and is supported by the presence of concomitant conditions (internal and external factors) in children.

Key words : Play therapy, developing intellegience

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Introduction

Mental retardation (MR) has four categories, that is, the lightweight MR has an IQ range 50-55 to about 70, have reading and arithmetic skills up to grade 3-6 SD. MR mild level of IQ 35-40 to 50-55 able to learn simple communication, simple hand skills, basic self-care, at this level children can still be guided and trained to be functioning in the social environment. At MR the weight level has an IQ range of 20-25 to 35-40 is usually capable of walking but has a specific disability, at this MR level can understand the conversation and respond, but not progress in reading and arithmetic skills.

MR child is having ability to be trainable and uneducable. Thus, the learning process focuses more on training children with skills that enable them to function in the social environment. Specialized training programs provided to MR children are being implemented according to the child's capability. Play therapy is an approach that will be tested, it is because the MR is in general will be easy to understand a concept or ability if the learning situation using a concrete type of material. The training provided

for the MR boy is being more toward a game that trains speech, simple skills within the scope of the cognitive, psychomotor, and adaptive social aspects.2-4

Assessment of the success of this play therapy process, using the Wechsler Intelligence Scale for Children (WISC) test kit. This WISC test function is to be able to measure standardized intelligence. The assessed score is the result of the accumulation of verbal test assessments and perfoMRance tests available on a full scale.5 This instrument can provide an overview of the intelligence condition of the MR before and after therapy.

The group of MR children is being included into being able to train, so there is still a chance to develop the potential of his intelligence. Researchers will conduct a series of approaches through play therapy to provide a stimulus in developing the potential of intelligence. Through play therapy can be known about the world imitate, explore, test, and build so it will greatly help develop therapeutic relationships and help children in communicating their problems.

This research was conducted to find out :how important the application of play therapy in stimulating the skills of training includes the verbal aspects of test and perfoMRance tests on the MR mild children, so it can be an effective foMRulation in the delivery of extraordinary education to be able to apply play therapy in learning in school and a solution for parents to be involved in stimulating The development of the ability of the child MR is with the easy way so as to interact and move in the environment. The results of this study can also be an innovation of child growth monitoring and also know the limitations of children, as well as a motivator for the world of child and midwifery education in suppressing the rate of disability and the pain of children from an early age.

Based on that, it can be raised the problem of efforts to make children with special needs, especially in children MR is by developing the potential of intelligence possessed by children through play therapy.

Method

Assessment of the child's mental retardation (MR) and its level is done through the WISC test which includes verbal test assessment (infoMRation, comprehension, arithmetic, similiarities, digit span) and perfoMRance tests (picture competition, pict arrangement, block design, assembly object, coding) . The assessment results in a full IQ that can deteMRine the MR level experienced by the child. This test is given individually at the time before and after therapy is given. The measurement results have a high correlation with the results of Stanford Binet and LIPS Test. The assessment process is done by a team of child psychologists as much as 2 people who have experience in their field.

The result of WISC assessment of phase I can be known the description of the condition of the child before the therapy is given, as well as to help the selection of research subjects according to the needs of the researcher is a child of mild mental retardation (MR) who follow learning in SLB Putra Bangsa Surabaya and aged7-15 years old. Taking a sample by purposive sampling, from 34 students who experienced MR obtained research subjects that meet the criteria of 13 people. The research design used a false experiment with pre-post design

approach. The study was conducted for 4 months from October 10, 2015 s.d. January 2016, and the research place at SLB Putra Bangsa Surabaya.

The instrument used in the study as described above is a WISC test device for assessing the MR intelligent level of the child being pre-test and post test. Other supporting instruments used are identification foMRats or known Children's Needs Identification Kit (AI-AKK) is a well-established instrument, used for childhood birth control, childbirth, and child growth phases. Other instruments used by the researcher to observe the daily life of MR children outside the school are in the home and playground, using a daily activity foMRat filled by parents and / or family members.

This research begins by collecting information through interview process between researcher and parents of children MR using AI-AKK. Then followed the assessment of WISC test (including verbal test and perfoMRance test) stage 1 by a team of psychologists, to see a picture of the MR child intelligence being pre-tested before playing therapy.

The next stage, conducted a process of playing therapy for 2.5 months conducted indoor and outdoor that involves a team of psychologists, teachers, and parents. The play therapy given to the MR child includes the cognitive, psychomotor, and social adaptive stimulus therapies. This type of play therapy is more dominated by social-adaptive psychomotor aspects such as in sports such as playing ball, swimming, sand play, pet care, and plant maintenance in their school environment. Stimulus in pure psychomotor aspects includes drawing, and road balance. Stimulus to the psychomotoric-cognitive aspect: educative games such as ball grooves, matching shapes, composing beams, candle games. Stimulus of pure cognitive aspects such as music therapy and short stories. Social cognitive-adaptive stimuli include children's movies. To stimulate the cognitive, psychomotor, and social adaptive of outbound outside the school environment.

During the play therapy process, monitoring of children's activities is continuously conducted in schools as well as outside schools where children move. The monitoring was carried out using a daily activity book provided by the researcher. This stage involves the role of escort teachers as children at school and parents / families for children outside school activities. In the final stages of the study, an evaluation of the development of a mild MR child by a team of psychologists through the assessment of the WISC stage 2 test (verbal test and performannce test) as a post-test stage.

With 2 (two) stages of pre-test assessment the post-test, will be able to know the success rate of children respond to play therapy in developing the potential of intelligence. This is seen from the shift in the ability of children before and after being given play therapy. Furthe more, the researchers conducted an analysis of the success

rate as seen from the frequency of play therapy as well as the internal and external conditions of the MR child accompanist being in response to play therapy.

Data collected by instrument This study was then analyzed using 2 stages of analysis process that is statistical analysis and descriptive analysis.

The first statistical analysis, used for assessed the impact of therapy therapy on significant changes in the development of the studied aspect, ie cognitive, psychomotor, and social adaptive of a mild MR child. The statistical analysis approach used at this stage uses Wilcoxon Signed.

The second statistical analysis, conducted the assessment to be able to evaluate the increase in pre test achievement of the post test based on the intensity of the stimulus, which is defined in 3 categories, which often give therapy, sometimes, and rarely provide therapy. This stage analysis approach uses Kruskal Wallis.

Descriptive analysis is used to be able knowing the condition of the MR factors) to his ability to respond to play therapy in enhancing the successful development of the intellectual potential of the RM mild child. For this time the complete data required condition of child and family especially mother. Researchers get it from the process Identification includes the study of internal factors (history of pregnancy, childbirth, childbirth, growth and development of children, and health conditions during the research process) and external factors (socioeconomic conditions and family care patterns).

Result

The scope of this study is the application of play therapy in the learning process and how MR's children are able to respond in the foMR of developing the potential of intelligence in the cognitive, psychomotoric, and affective domains. Based on Table 1 it can be seen that of 13 subjects who followed the play therapy there are 7 subjects who managed to experience an increase in the potential of intelligence above the average achievement of other subjects after playing therapy.

Tabel 1 Recapitulation of Play Therapy Result in Developing Child Intelligence Potential Mild MR

No	Kode	Usia	Keterangan Hasil Penilaian			Kriteria
			Pre Test	*Post Test*	Peningkatan %	
1	C	7 th 7 bln 25 hari	16	26	38	Berhasil
2	A	8 th 0 bln 14 hari	8	30	73	Berhasil
3	B	10 th 8 bln 17 hari	13	30	57	Berhasil
4	D	11 th 3 bln 01 hari	5	8	37	Berhasil
5	E	11 th 10 bln 21 hari	10	16	37	Berhasil
6	F	12 th 1 bln 17 hari	6	9	33	Berhasil
7	G	12 th 8 bln 08 hari	21	29	28	Berhasil
8	H	9 th 10 bln 04 hari	8	11	27	Cukup berhasil
9	J	9 th 3 bln 26 hari	19	21	10	Tidak berhasil
10	L	10 th 4 bln 26 hari	17	16	-	Tidak berhasil
11	M	11 th 7 bln 14 hari	8	7	-	Tidak berhasil
12	I	11 th 10 bln 29 hari	8	9	11	Tidak berhasil
13	K	12 th 7 bln 08 hari	6	6	0	Tidak berhasil

Tabel *Steam and Leaf* Kruskal Wallis

Golongan I/ Sering			Golongan II/Kadang-kadang			Golongan III/Jarang		
X	R(X)	$R(X)^2$	X	R(X)	$R(X)^2$	X	R(X)	$R(X)^2$
30	12	144	3	6	36	2	4	16
25	11	121	3	6	36	1	2	4
8	9	81	3	6	36	1	2	4
6	8	64				1	2	4
10	10	100				0	0	0

Based on experimental results conducted on 13 RM children using Wilcoxon signed in Table 2, obtained H arithmetic (-2.76) and H critical point (-1.645) and obtained p = 0.006. It shows which shows the intellectual potential of the RM Mild is experiencing a significant development through the provision of play therapy. Based on Table 3 we can see the frequency

2 Hasil Pengukuran Keberhasilan Terapi Bermain Terhadap Perkembangan Potensi Kecerdasan Anak RM Ringan

Sampel	Analisis Keberhasilan		D	|D|	Ri	(SR_i)	$(SR_i)^2$
	Pre Test	*Post Test*					
A	16	26	-10	10	10	-10	100
B	8	38	-30	30	12	-12	144
C	19	21	-2	2	4	-4	16
D	8	11	-3	3	6	-6	36
E	17	16	1	1	2	2	4
F	13	38	-25	25	11	-11	121
G	5	8	-3	3	6	-6	36
H	8	7	1	1	2	2	4
I	10	16	-6	6	8	-8	64
J	8	9	-1	1	2	-2	4
K	6	9	-3	3	6	-6	36
L	6	6	0	0			
M	21	29	-8	8	9	-9	81
						$\Sigma SRi=-70$	$\Sigma(SRi)^2=646$

Keterangan: $Z=\frac{\Sigma SR_i}{}$ $Z=\frac{-70}{}$ Z=-2,76

Tabel 3 Distribusi Frekuensi Pemberian Terapi Bermain

Pemberian Terapi	Frekuensi	
Keterangan Sering		5
5 B Kadang-kadang	3	
2 B,1 C Jarang	5	
5 K		
Jumlah	13	

Keterangan: B (berhasil), C (cukup berhasil), K (kurang berhasil)

Play therapy during the study has an impact on the success rate of the subject in developing the potential of intelligence, ie 5/13 subjects who are often given therapy including successful categories, 3/13 subjects who sometimes provide therapy have varied results two of which include successful categories and I Subjects including the category quite successfully and 5/13 other subjects who are rarely given therapy including the category less successful.

Based on Tables 1 and 3, it can be concluded that 7/13 RM children are experiencing an increase in the potential development of their intelligence and 5/13 of those RM children are getting frequent play therapy compared to other groups of children.

The quality of the RM child's success is in developing the potential of intelligence based on the frequency of the given therapy can be known, with statistical analysis Kruskal Wallis as follows:

Using the Steam and Leaf Kruskall Wallis obtained chi-square results 10,276; Df = 2 and p = 0,5 while for the analysis.

Each of the following sections: Goal I vs Gol II result Wilcoxon = 6,000 with p = 0.022, Goal I vs Gol III results Wilcoxon = 15,000 with p = 0.005, Goal II versus Goal III result Wilcoxon = 15,000 With p = 0.02.

Based on the analysis results can be explained that group I is often given play therapy will increase the potential for better intelligence compared to Group II. Similarly, if compared to group I with class III, shows the development of the potential of intelligence in class I is better than the class III, whereas if the compared is class II with class III then the class II better development of the potential of intelligence compared with class III.

To see the condition of the comer (internal and external) the RM child is supporting the ability to respond to play therapy, the researcher conducts an in-depth review by involving parents and family as informants. The researchers made a group of internal factors through a phase approach experienced by the study subjects since pregnancy, childbirth, growth and development, as well as external factors to assess external support conditions that affect child development disorders.

Based on Table 5 it can be described that of 13 mild RM children, based on the studied environment, the presence of internal and external factors on the RM children is that in the internal factors (phases of pregnancy, labor and fall) there are 43 cases, of which 12 cases occur In the pregnancy phase, 7 cases in the labor phase, and 24

cases in the child's growth and further nurturing phase) whereas external factors found 12 cases affecting the formation of children experiencing mental retardation (family support, family economic level, limiting the social scope of children, Late entering children into school environment, child care taken over by guardian).

Discussion

Based on the results of research that has been done in SLB Putra Bangsa within 4 months of 13 students in the medium group of children RM, obtained an increase in potential children. It is based on the cumulative achievement of two types of assessment, namely verbal test and performace test that can assess the child's ability aspects of cognitive, social adaptive, and psychomotor aspects as a description of the child's intelligence potential.5-8 Improved efficacy of playing therapy is judged by the improvement of each pre-assessment substance Test on the post test used as a reference description of the potential intelligence of children who have developed through the process of playing therapy.

Statistical analysis using the Wilcoxon signed approach shows that there is a significant development of the potential for intelligence of a significant RM child. This situation can be seen from the improvement of some aspects of verbal and performance experienced by RM children at the time before after being given play therapy, the circumstance indicates that play therapy is able to develop the intellectual potential of the child RM being.

The more often a child is given a stimulus to play therapy, the better the child can develop the potential of his intelligence. The more rarely a child is given a play therapy stimulus, the less chance it will have to develop the potential of its intelligence.12-15 It is supported

A statistical analysis using the Kruskall Wallis approach in Table 4 shows that there is a significant difference between children who are frequently given rare or poorly given play therapy and children.

Success in developing the intellectual potential of RM children is being based on the conditions of internal and external child combatants. Internal in response to play therapy seen from 3 domains (cognitive, psychomotoric, and affective) can be analyzed as follows15 on subject A is administered with the initial stages of the researcher introducing various basic forms on A such as beams, triangles, cubes, tubes, color. After recognizing the basic shape (C1) A is required to arrange it in accordance with the samples the researcher has made. At this stage, A looks focus on the ball media with a variety of sizes and colors which are then compiled into a pyramid ball stack. His interest in the ball media makes it easier for researchers to stimulate a variety of games that are able to develop their potential intelligence.

The cognitive aspect that can be developed on A through ball media can be achieved up to the stage of application or re-disclosure (C3), this is evidenced by its ability to imagine with ball media as in drawing the ball with a mixture of white and black, the creativity of the hand make the ball by paying attention to the line hemisphere And his ball counting ability, and grouping according to their size. The affective aspect is seen as an improvement, this is seen from the change of A from the initial stage of interest in the ball media (A1) to the ability of the child to ask any object in its spherelike environment (A2).

The psychomotor aspect also shows an improvement, seen from the reaction of each seen ball to be taken. A will sort it out by size (P1) to be further arranged to form a pyramid. A larger ball will be used as a pre-eminent ball for him to strike at the ball pyramid he has drawn up (P2).

In subject B with the initial stage the researchers introduced various basic shapes on B such as beams, triangles, cubes, tubes, circles, and color balls. After recognizing the basic shape (C1), B is required to construct the basic shape according to the example the researcher has made. At this stage, B really likes the field of cubes and triangles. His understanding of the shape of the cube and triangle was poured into forming a simple house consisting of four cubes and a triangle as a roof (C2).

Affective domains look based on an ever-vibrant response whenever a game builiding beam (C2) is played. In this game the child is given the opportunity to develop his imagination to compose beams into the form they have seen in their environment, such as houses, bridges, towers, etc. His interest, making B able to arrange the blocks in a fast time and resembles the actual conditions. It has already shown an increase in B in the psychomotor domain of readiness (P2).

In subject C at the early stages of the study, it introduced various basic shapes on the C subject such as beams, triangles, cubes, tubes, circles, and color balls. At this stage C can match the basic shape in the empty spaces that have been provided by the researchers. This is done to check the ability to remember it (C1). The ability to match these basic objects shows the attention of the child at the time of learning (A2) as the stage of responding to the activity. The development of the psychomotor domain is indicated by the ability to construct the puzzle quickly (P2).

In subject D in the early stages of the study introduced various basic shapes on D such as beams, triangles, cubes, tubes, circles, and color balls. After recognizing the basic shape (C1) the child is asked to arrange the basic shape in accordance with the example that has been made by the researcher. At this stage, D is particularly fond of blocks, cylindrical, and rectangular. His understanding of the form is poured in

forming high bridges and towers (C2) in building block activities.

Subject D has the pleasure of water, this is seen from his habit at home. The affective aspect shows the progress of its response to the willingness of learning. Based on the report of the companion teacher of children experiencing complications in terms of counting, the therapeutic approach used by researchers is to calculate the game of fishing that is counting the number of fish from the catch. The interest shown by D mununjukkan affective domain level two is responding (C2, A2).

For psychomotor development does not change, it is due to limitations of upper and lower extremities. This is evident in every type of game given D is only capable of stringing but not able to develop it into another form which is a modification of its basic form (P1).

In subject E at the early stages of the study, it introduces various basic shapes on E such as beams, triangles, cubes, tubes, circles, and color balls. After recognizing the basic shape (C1) E is required to arrange the basic form in accordance with the examples that have been made by researchers. At this stage E simply repeats and matches the basic shape in place (C1). E is one of the students who are known to be diligent in completing homework (A2). Her habits at home such as diligent sweeping and also washing dishes, is a tardiness as if covered with independence. Play therapy makes the subject E able to cause confidence so that makes it easy to socialize. This is demonstrated by his ability to practice and explain every work E has completed with his peers (P2).

In the F subject at an early stage, the study introduced various basic shapes such as beams, triangles, cubes, tubes, circles, and also color balls. After being able to recognize the basic shape (C1) subject F was asked to arrange the basic form in accordance with the example that has been made by the researcher. At this stage F simply repeats and matches the basic shape in place (C1).

Subject F is one of the students who always look neat and known diligently in completing every homework (A2) including the duties in play therapy, each student is given pets for each subject of research. F loves and loves pets (one of the therapeutic media play to cultivate natural intelligence). F is able to care for his pets very well. This can be seen from the condition of pets are well groomed and healthy. Play therapy makes the subject F able to grow independent and confident attitude so that makes it easy to socialize. This is shown by his ability to explain how he took care of his pet to his friends (P2).

Subject G is one of the slowest girls included SLB. This is because of the social phobia they experience. Play therapy makes it able to gradually interact with peers. During G play therapy able to follow instructions well (C1) it's just the ability of understanding is still slow. Subject G enjoys coloring

as well as drawing, so any homework that G can do works well.

The award given by the researcher during the therapy process to subject G can make him more confident in doing every activity (A2). Every work he made always wants to be shown to his peers and explains how he can make it. It shows that psychomotor ability has reached the realm of readiness (P2) .18,19

Subject H belongs to a group of children who rarely speak so that H alienates from the environment of his peers. Through play therapy can be known needs H in understanding learning. H really liked the hand puppet media, the attraction can stimulate H to start speaking completely. By the time H is holding the hand puppets provided by the researcher, H is able to describe his imagination through a series of stories he composed by moving the hand puppet he holds (P2). The obstacles experienced by H are in the cognitive domain only capable of imitating the phases without being able to understand from what they learn.

Subject I has pretty good potential in drawing, his ability in pouring his imagination is seen from the images he mimicked into the color pencil scribe (C1). Each drawing activity, he was able to show better results than other peers. The researcher's drawing book

Provide for every child in stimulating spatial intelligence, able to complete well and complete. I include a jovial child and has a stable emotion so that in every lesson he is always concerned (A1). In the psychomotor domain I was able to go into the stage of readliness to act (P2) as well as I always show the work on his friend.

Subject J is included in a group of emotionally unstable children so many peers are away from him. Subject I only able to follow less than 15 minutes of learning (A1), the inability to focus on what is conveyed by the researcher makes it can not be silent and always interfere with other peers. I only able to follow instruction at the beginning of play therapy process, then I less cooperative in all things (C1). There are interesting things from I that is the ability to explain in a sequence and complete every environmental phenomenon that he sees. For example I was able to explain in detail the components of the establishment of a school flag pole such as a tall white pole, at the top there is a red and white cloth, how to raise it through a pulley and so on. It shows the ability of I in the psychomotor domain at the stage of readliness to act (P2).

Subject K is included in a group of children who rarely speak, this situation is due to restricting the social scope of children in the family, as a result parents can not accept the limitations possessed by children. Subject K newly entered SLB 6 (six) months earlier. Researchers get sluggish in every aspect such as following instructions, emotional control, psychomotor balance, etc.

In the cognitive domain the child is only capable of imitating, the situation is too slow to be able to do when compared with other groups of children (C1), as well as in the affective and psychomotor domains, the child is only able to arrive at the basic stage (A1, P1) And describe them.19,20

Subject L belongs to a sensitive group of children, any circumstances he is unable to do depress him so that not infrequently his spasms can be stimulated at that time. Fever and seizures are still experiencing today. This vulnerability makes it far behind compared with peers. The interesting state of subject L is the ability to count well enough, in healthy condition L is able to follow well each instruction instruction (A1), ability to imitate every activity taught by the researcher (C1) and can identify every activity it does (P1), will But its ability is difficult to develop when the seizure condition has recurred.

Subject M is physically like a child generally, but the inaction of M in learning that distinguishes it with his age peers. M one of the students who experienced psychological pressure from the guardian who took care of and raised her. M is not able to develop its potential because at the current age, M has been required to be able to help his family at home.

Limitations of time have to play, causing M to feel no freedom to express and to be creative, so that the potential development result is difficult to be improved both in cognitive (C), affective (A), and psikomotorik (P) domains. This is due to the limitation of the social scope of children in the family resulting in child slowness in various aspects.19

In the cognitive domain of children only able to imitate, the situation was too slow process to be able to do when compared with other groups of children (C1). Similarly, the affective and psychomotor domains of children are only able to the basic stage (A1, P1) for example pay attention to the learning process and describe it.

Based on the above circumstances, the researcher makes the conclusion of the research by using analysis of 3 laws of convergence as follows20

The law of convergence I: when the influence of innate is as strong as the influence of the environment then the educational outcome will be good and balanced. That is, if children who experience RM is being given appropriate stimulus, gradually, and continue to follow the development of his brain then they will be able to develop the potential it has. This is in line with the researcher's hypothesis that play therapy is an effective approach to stimulate the development of children's intelligence

The law of convergence II: when the innate factors are stronger than the environment then the education tends toward innate. This means that if many of the triggering factors that accompany the RM moderate child

(internal and external factors), while the frequency of playing less therapy, the child is less likely to be able to unlock the potential of his intelligence and difficult to adapt to his environment. This is in line with the second hypothesis which states that the more frequent play therapy is given to the moderate RM children, the greater the likelihood of developing the potential for intelligence.

The law of convergence III: when influence environment is stronger than its embawaan, Then the result of education is more directed to what the environment hopes for. That is, that the more the therapeutic process of play is given and the support, protection, and comfort of the environment and the cooperation between the parent-teacher in creating a conducive atmosphere during therapy, it can replace some of the genetic obstacles in responding to play therapy. This is in line with Hypothesis III that factor internal and external integrity in children has an impact on the quality of intellectual development of the mild MR children.

Describe the law of convergence can be formulated: play therapy is the most effective way of approach for a moderate RM child. Judging from the quality of play therapy ability to develop the potential of intelligence is influenced by the frequency of play therapy and the conditions that accompany the child (internal and external factors).

This research is expected to be input to progress in general school education (SLB) generally and specially for early childhood education, nursing, children with special needs and midwifery, In producing the right formulation to stimulate the mild RM light development of children, in an easy, inexpensive, effective, efficient and fun way.

Benefits of research for the advancement of education SLB, that with the application of play therapy such as able to create a fun learning atmosphere for children, closer teacher accompaniment with children, and facilitate the parent / guardian to be involved in helping to stimulate child development and evaluation of child development easier.

Benefits of research for the advancement of education

Nursing children, early childhood education and also midwifery education, that the importance of the role of health workers to

Minimize trauma in children, whether physical

Or psychic during the phase of the course that is from the period of pregnancy until tumbang.Pada period of pregnancy is important to always be monitoring fetal growth and the condition of pregnant women, meet the needs of mother-infant to maximize the risk of pregnancy risk factors as maximum

Impact on birth complications and child development disorders. The most important situation is the

importance of screening efforts against the risk of mental retardation in children such as genetic factors, age factors, etc.

As demand demands health personnel need to be so as to reduce the frequency of RM incidence. Thus, health workers, especially midwives have an important role in the intellectual life of the nation from an early age through the provision of good and comprehensive obstetric care to form a healthy generation.

Reference

1. Kabra M, Gulati S. Mental retardation. Indian J Pediatr. 2003;70;153–8.
2. Sebastian CS. Mental retardation. Indian J Pediatr. 2001;13;20–65.
3. Kay J, Tasman A. Essentials of psychiatry: mental retardation. Eur J Hum Genet. 2006; 285–93.
4. Chelly J, Khelfaoui M, Francis F, Cherif B, Bienvenu T. Genetics and pathophysiology of mental retardation. Eur J Hum Genet. 2006;14:701–13.
5. Alat Identifikasi Anak Berkebutuhan Khusus. Jakarta: Direktorat Pendidikan Luar Biasa Departemen Pendidikan Nasional; 2004.
6. Ahuja AS, Thapar A, Owen MJ. Genetics of mental retardation. Indian J Med Sci. 2005 Sep;59(9):407–17 .
7. Carolyn D. Variation in the influence of selescted sociodemography risk factor for mental retardation. Am J Epidemiol. 2005; 85(3):200–10.
8. Stromme P, Hagberg G. Etiology in severe and mild mental retardation: a population based study of Norwegian children. Indian J Hum Genet. 2000;42;76–86.
9. Zlotogora J, Shohat M. Genetic screening for autosomal recessive non syndromic mental retardation in an isolated population in Israel. Eur J Hum Genet. 2007;15;250–53
10. Mulati S, Wasir V. Prevention of developmental disabilities. Indian J Pediatr. 2005;72:975–98.
11. Karen HH. Mental retardation. Indian J Pediatr. 2006;53:100–12.
12. Laurina D, Decoufle P. Is maternal a risk factor for mental retadation among children?. Am J Epedimiol. 2006;149(9):12.
13. Helen MK. ABC of clinical genetics: chromosomal analysis. Edisi ke-3. London: BMJ Publishing Group; 2002.
14. Stromme P, Hagberg G. Etiology in severe and mild mental retardation: a population based study of Norwegian children. Indian J Hum Genet. 2000;42:76–86.
15. Jensen E. Memperkaya otak (cara memaksimalkan potensi setiap pembelajaran). Jakarta: PT Indeks; 2008.
16. Amudha S, Aruna N, Rajangam S. Consanguinity and chromosomal abnormality. Indian J Hum Genet. 2005;11:108–10.
17. Greydanus DE, Pratt HD. Syndromes and disorders associated with mental retardation. Indian J Pediatr. 2005;72:859–64.
18. George MS, Laurien. Subtelomeric rearrangement in idiopathic mental retardation. Indian J Pediatr. 2005;72:679–84.
19. Shahib N. Pembinaan kreativitas menuju era global. Bandung: Penerbit Karya Pustaka; 2000
20. Shahib N. Pendidikan berbasis kompetensi menuju invensi. Bandung: Gema Media Pusakatama; 2005.